

#### REMARKS

Review and reconsideration of the Office Action of June 29, 2004, is respectfully requested in view of the above amendments and the following remarks.

The specification has been amended to correct a typographical error and to include the language of Claims 46 - 52, without adding new matter to the Specification.

New drawing pages are added that include new Figures 11, 12, 13 and 14, which are supported by Claims 46, 47, and 49-52.

Applicant has amended the claims to overcome the Examiner's rejection. Care has been taken to ensure that no new matter is added to the claims. Support for the amendment to Claims 27-52 is found in the Specification and the drawing as originally filed. Specifically, the amendment to Claim 27 can be found in paragraphs [0008], [00010] and [00025]. The amendment to Claim 46 is supported by Figures and paragraphs [0008] and [00010]. The amendment to Claim 47 is supported by paragraph [00015].

#### Present Invention

The present invention teaches a device for game installation and at the same time training installation for improving the shooting technique of ice hockey or roller hockey players in a competitive format.

#### Office Action

Turning now to the Office Action in greater detail, the paragraphing of the Examiner is adopted.

U.S. Application No. 10/018,620  
AMENDMENT A

Attorney Docket No.: 3648.030

**IN THE DRAWING**

After Fig. 10, page 5 of the drawing sheets, please add Figures 11 - 14 to the drawings as attached at the end of this response.

**Paragraph 1 (Drawings)**

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Specifically, the Examiner states that the features of Claims 46-52 must be shown, or the feature(s) canceled from the claims.

In response, Applicants provide the Examiner with new Figures 11-14. Applicants state that the new figures are supported by Claims 46-52 as filed.

Further, Applicants have added paragraphs [00043] through [00046] to the specification to provide written support in the description for the figures through importing the wording of Claims 46-52 into the specification. As decided in *In re Koller*, 613 F.2d 819, 204 USPQ 702 (CCPA1980) the claims are their own written description, and resultantly, no new matter has been added by way of this amendment.

Acceptance of the newly added figures is requested.

**Paragraphs 2 - 7 (Claim Rejections - 35 USC § 112)**

The Examiner rejected Claims 27-52 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Examiner stated that the claims contain subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In response, Applicants have amended Claims 27-52, to overcome the rejection of the Examiner.

In view of the above amendments, Applicants request that the objection to the claims under 35 USC 112, first and second paragraphs, be withdrawn.

**Paragraphs 8 - 10 (Claim Rejections - 35 USC § 103)**

The Examiner rejected Claims 27, 29, 33-37, 44, and 52 under 35 U.S.C. 103(a) as being unpatentable over Gronroos WO '950 in view of Belleisle '304, Cuneo '000, and Stephenson '237. Applicant notes that the Examiner is of the opinion that Applicants' base invention is taught by the combination of Gronroos WO '950 in view of Belleisle '304, Cuneo '000, and Stephenson '237, and it would have been obvious for a person skilled in the art to make such a devise.

Applicants traverse this rejection as follows.

In response, Applicants respectfully submit that none of the three references, either alone or in combination, teach or teach toward the invention of amended Claim 27. Applicants assert that no proper basis for an obviousness has been established. The Examiner is reminded that in order for a combination of references to render an invention obvious, it must be obvious that their teachings can be combined. In re Avery (CCPA 1975) 518 F2d 1228, 186 USPQ 161.

The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination or it is a logical reason of record which justifies the combination.

To properly combine two references to reach a conclusion of obviousness, there must be some teaching, suggestion or interference in either or both of the references, or knowledge generally available to one of ordinary skill in the art, which

would have led one to combine the relevant teachings of the two references. Ashland Oil Inc. v. Delta Resins and Refractories, Inc. et al. (CAFC 1985) 776 F2d 281, 227 USPQ 657.

Applicants contend that the references do not contain any suggestion or motivation to combine them in the manner suggested by the Examiner. In particular, the three references directed to hockey puck shooting ranges include no suggestion or motivation whatsoever to combine them with the Stephenson reference (US 6,174,237) directed for a method for an online game of skill tournament, and vice versa. Especially since Stephenson only deals with video or virtual game situations, not any real life installation for shooting a puck. Moreover, as is apparent from the detailed discussion of the prior art set forth below, even the combination of all four references does not teach all of the features recited in the rejected claims.

The reference discussion follows the paragraphing and comment order of the Examiner. Further, those sections of prior art referenced cited by the Examiner are set out in italics prior to Applicants' comments.

#### Gronroos

*"Gronroos discloses the following ..."*

Game platform, goal with targets, target identifiers, a computer and a passing unit.

Applicants state that the above listed features are not the major parts of Claim 27. A main feature of Applicants' invention in Claim 27 is the puck magazine 30. However, the puck magazine of Applicants' invention is completely different in form and functionality than the puck storage silo of Gronroos. The Gronroos silo can be called a "puck magazine", but

it cannot be a required part of Applicants' closed puck circuit that must function as a buffer between the rhythmical shooting action and the random input of pucks by the collecting and sorting instances. In Gronroos' silo, the pucks lay one on top of the other in a stack that can only be piled up manually. A major part of the Applicants' experimentation involved the development and creation of their puck magazine, which is more than just a container of pucks. The puck magazine of Applicants' invention is able to receive pucks from a conveyor device and stores pucks one behind another with minimum space requirement. This arrangement of stored pucks also allows effortless release of one puck at a time at a minimum of energy input and at a minimum of parts and technical effort compared to Gronroos' mechanisms.

*" the puck dispenser is located above the level of the game platform ..."*

The Examiner is mistaken; Gronroos does not disclose a puck dispenser located above the level of the game platform. In Gronroos, the puck shifting device is on the level of the puck hurler, which is as close to the surface of the exercise ground as possible in order to serve regular flat passes and not flip passes.

*"...which are advanced from the magazine by gravity ..."*

In Gronroos, the puck on the bottom of the stack is shifted against the resistance of the puck stack above to the puck hurler by an energy consuming and complicated mechanism, and the following puck within the puck silo drops to the bottom by gravity when the shifting device comes back. With Applicants'

invention, there is a distance between the puck magazine and the puck dispenser, which is a segment of the puck course that starts between the collecting surfaces and ends at the end of the nozzle of the passing machine, where the pucks travel from the puck magazine to the puck dispenser by gravity. Therefore, the Examiner can generally conclude that both inventions engage gravity, however, each engages gravity with significantly different connections, functions and arrangement.

*"The target surface has a mat and the targets are divided into partial target surface A and B ..."*

Applicants note that Gronroos only designates the corners of the goal with 6a -6d, where each corner has only one opening as a target, and, therefore, there is no possibility to differentiate between the accuracy of shots; there is only hitting or missing.

It is clear from the Examiner's comparison that Applicants' invention is not understood by the Examiner. Claim 33 of Applicants' application references these features:

" ..., wherein target surfaces on a target mat are hierarchically divided into partial target surfaces A, partial target surfaces B and partial target surfaces C." As the Fig. 2 shows, a target surface is bottom left, top left, top right and bottom right. Each of these target surfaces are divided, and for instance, partial target surfaces A are the hardest to hit and appear in all four corners of the goal. Partial target surfaces B are second, and partial target surfaces C are third hardest to hit and are present in each corner of the goal. This is meant by hierarchical order, as hit A-targets give the most points and hit C-targets give the least.

*" ... a control console with control keys ..."*

There is a control console for any computerized machinery in order to start and stop and possibly make adjustments. However, what Applicants teach is a control console that is designed to be completely operated by the user with his stick in his hands and without leaving the shooting posture, and that can be shifted on the short side of the platform to adapt for both left- and right handers.

Gronroos has a control unit that is somewhere behind the goal, which certainly is not meant to be operated during the training session by the person who exercises shots, and if it was, there is no indication that it can be operated with a hockey stick and the gloves on.

#### **Belleisle**

*"Belleisle teaches the following: A conveyor apparatus for a hockey puck shooting range ..."*

The conveyor apparatus of Belleisle is a completely different type of conveyor and has a simple function. The Belleisle conveyor only transports, and could transport all kinds of items, as it is wide without special carriers.

*"Two inclined collector surfaces extend towards a conveying channel, the channel has perpendicular walls and is so narrow two flatly oriented pucks cannot lay side-by-side ..."*

This is not the case. The invention of Belleisle only looks similar when looking at the intersections in the drawings. Belleisle shows a wide and flat conveyor belt. The transported pucks drop into a funnel in random order, and in another random



order, come to lie on the second conveyor belt that is transporting the pucks to the passing device. Belleisle simply avoids the problem to align and sort pucks, which would be the prerequisite to store collected pucks. Therefore, this system won't work to the satisfaction of the user, because it would serve passes in random intervals, two or even more pucks at a time would be possible. Belleisle does not show a conveying channel that forces the pucks to lay one after the other. At no phase of the transportation are the pucks aligned and sorted. The purpose of Belleisle's funnel is not to lose pucks when reloading from one belt to the other. The funnel is not directly collecting fired pucks, because it is away from the goal and not accessible from the platform.

In Applicant's invention, the collector surfaces are all along the conveying channel underneath the goal. The conveying channel forces the pucks in the first phase of sorting not to lay side-by-side. It is the indispensable first step in the consecutive process of aligning, sorting and storing pucks. Also it allows the conveying belt to have minimum dimensions, which is counter to the wide belt of Belleisle. The collecting ability of Applicants' invention is much more efficient, because fired pucks that rebound from the net or the crossbar are kept in the collecting area by gravity, other than with a flat surface, where pucks often would bounce or roll away from the flat belt. Therefore, Applicants conclude that their invention is principally different from Belleisle, and it is advantageous and new.

*"A circulating conveyor runs on the base of the conveying channel in order to initially transport the shot and unsorted pucks in the conveying channel ..."*

Applicants previously stated that this is an incorrect statement about the conveyor of Belleisle. Specifically, the conveyor belt of Belleisle runs on the platform level, which is as wide as the collecting area is wide, and has no puck carriers.

*"By having a conveyor apparatus and two inclined collector surfaces, one of ordinary skill in the art would provide efficient transportation of the hockey pucks."*

Applicants' invention is the first to apply two inclined collector surfaces, which are not an equivalent to a funnel. One of ordinary skill in the art certainly can provide transportation, like Belleisle does, but to perform transportation and sorting at the same time and then filling a puck magazine, all with one specially designed conveyor chain for hockey pucks, using the course this conveyor chain takes, it requires experimentation and inventive genius. Already the horizontal transportation in Applicants' system necessarily must perform the first step of sorting, otherwise it cannot continue to the second step up the 45° slope, where pucks that are lying on top of other pucks or are not lying flat, slide or roll back until they lay flat and are grabbed by the next free driver, and then to the third step vertically up, where all flat lying but surplus pucks in front of one driver are thrown off, so one driver only can carry one puck, which again is necessary that the lift-off tongue can take the pucks from the conveyor chain trouble-free.

Cuneo

"Cuneo teaches the following: Two light barriers ..."

The light barriers of Cuneo are meant to detect users who get too close to the goal. They are not used to measure puck speed and they cannot be used to measure reaction time - the time between receiving the puck and shooting the puck as it is first and second purpose of the light barriers in Applicants' invention. The third purpose is explained below.

*"... and points awarded to player for shots made ..."*

Applicants' invention teaches points awarded to the shot of the user in connection with the ability of the system to measure puck speed, reaction time, accuracy (by hierarchical arranged partial target surfaces), considering pass speed and pass interval. By weighing these factors in realistic relations, Applicants have developed a formula that comprises all factors to express the quality of each shot in a way previously unknown. Cuneo, like all other cited patent applications only register goals without differentiating in an advantageous and new way as Applicants' invention teaches.

*"The hit targets are captured by camera..."*

Cuneos does not teach this. The Cuneos camera is in the chest of the goalie, it looks in the opposite direction, towards the player and not towards the goal, so it cannot detect the puck in front of the target. Cuneo does not have target surfaces, he uses an ordinary goal with netting. Rather the camera is meant to provide the data for the computer to calculate the trajectory of the puck or ball and then to

position the goalie. (To do that however, the computer would need the exact distance of the object at the time a picture is taken, because to locate an object in 3-dimensional space, the third co-ordinate is needed, but Cuneo's suggestion only provides 2 co-ordinates on the 2-dimensional picture the frame grabber takes.)

*"and the image is captured at the calculated moment is compared in the computer to determine a hit ."*

Applicants' invention uses the image not only to determine whether there is a hit or not, rather it is used to determine if the indicated corner of the goal was hit and if yes what partial target surface was hit in order to determine accuracy.

Cuneo only wants to determine whether there is a hit or not, he cannot detect, where an object crosses to line. (A PIR sensor as Cuneo suggests, however, only can detect objects that are warmer than the surrounding, and, therefore, could not detect a puck or ball anyway, besides the fact that a PIR would be by far too sluggish to detect such a small and fast object within a narrow range.)

Applicants' invention uses a camera and light barriers, but in a completely different arrangement and with different intentions, that the manner in which they are used in the teaching of Cuneo.

### Stephenson

*"Stephenson teaches the following: The points awarded to the player form the basis for competitive play over a network ..."*

First, Stephenson relates to electronic games that, like all games with the exception of gambling, require more or less

skill in the specific game played. It is obvious that there are many electronic games played over the internet in the one ore the other competitive mode prior to the priority date of Stephenson. Second, he relates to a special tournament mode, which is not the first patented tournament mode (see Peter Eiba, Jan. 5 1999), although it is in the same field of invention.

What Applicants teach and claim, their invention is not a tournament mode, but the first open and objective world rankings on the basis of a sportive environment that measures and evaluates and stores physical performances of participants in a logic and lucid display. Opposite to tournaments, rankings represent a continuous comparison of performances of participants; it represents an objective mirror of real performance, whereas tournaments implement lucky elements. It is not to say that tournaments are less attractive, it 'is just a different kind of playing. Besides, Applicants' system will provide a perfect prerequisite for tournaments, but Applicant's intention was to create a never ending motivation for hockey players to develop their shot. Another difference is that Applicants' way to build and maintain rankings does not require that participants make any schedules to play against each other, which leaves maximum flexibility but maintains continued interaction.

**Summary:**

To combine the inventions of Gronroos and Belleisle by one of ordinary skill in the art first would result in the recognition, that the system of Belleisle itself would not work in reality because of puck jams, irregular passes, passes in random intervals and easy to happen more than one served puck at

a time. To overcome these problems, an instance is needed to sort and align pucks so that they can be stored automatically in a puck magazine, from where they can be released in reliable intervals.

It is important to note that the puck magazine of Gronroos is not made to fill in the pucks automatically, but is intended to fill the puck magazine manually. Therefore, it is not possible to combine Belleisle's collecting device with Gronroos puck magazine. What is required first is a different approach to collect and convey the shot pucks in order to align and sort them, which is an extraordinary task to do, as pucks are not balls and due to their rubber surface tend to wedge when they lay just as they happen to fall. Belleisle can only transport the shot pucks, but it cannot feed them into the passing device in a way that pucks will not get stuck, and it cannot serve passes in reliable intervals because there is no buffer, and for sure, pucks do not lie in regular order on the conveyor belt when they bounce back from the netting or posts and crossbar.

When searching to solve the problem of Belleisle's concept, the solution of Gronroos is of no help, because the magazine must have a principally different functionality. Applicants' invention found that different functionality, which is in principal a continuation of the course the puck travels in the conveyor belt lying flat and one behind the other after it has passed the sorting section of the conveyor course, and in addition to continue the course until the pucks are stopped by the puck dispenser.

In summary, Applicants' invention teaches a new and novel functioning system to collect, transport, sort, buffer and release pucks in a trouble-free puck circuit with all components

new to the state of the art, that are designed to interact in a way, that none of those components can be replaced by existing devices that seem to have a similar functionality at a first glance.

Applicants respectfully request that the rejection of Claim 27 under 35 USC 103(a) be withdrawn.

As Claims 29, 33-37, 44 and 52 all depend, either directly or indirectly from Claim 27, Applicants submit that they are not obvious in view of the cited art. Applicants submit that the further art cited against the dependent claims cannot be used in combination with the references cited against Claim 27 to create a device with a computer controlled puck circulation system, and used a light barrier and camera with a computer program to evaluate player shots, and assign a point value which can be entered into a international data network as claimed.

As a result, Applicants request that all the rejections to Claims 29, 33-37, 44 and 52 under 35 USC 103(a) be withdrawn.

**Paragraph 11 (Allowable Subject Matter)**

The Examiner stated that Claims 28, 30-32, 38-43, and 45 appear to encompass allowable subject matter, as best as he presently understands. However, in order to allow the claims, they must be rewritten to overcome the rejections under 35 U.S.C. 112, first & second paragraph, and the claim objections, set forth in this office action, and to include all of the limitations of the base claim and any intervening claims.

In response, Applicants added new Claims 53-70, wherein Claim 53 is the combination of Claims 27 and 28, in a form that overcomes the rejections under 35 U.S.C. 112, first & second paragraph. Further, Claims 54-70 are Claims 29-45, re-written

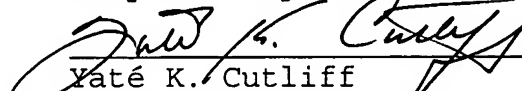
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to overcome any rejections under 35 U.S.C. 112, first & second paragraph, and to depend upon an allowable base Claim 53 and any intervening claims.

All claims are now in condition for allowance. Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.

Respectfully submitted,

  
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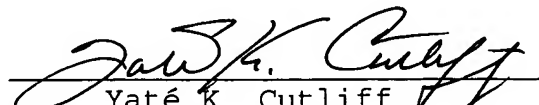
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Date: November 29, 2004

**CERTIFICATE OF MAILING AND AUTHORIZATION TO CHARGE**

I hereby certify that the foregoing AMENDMENT A for U.S. Application No. 10/018,620 filed April 12, 2002, excess claim fee payment letter, and Petition for two (2) months extension of time was deposited in first class U.S. mail, with sufficient postage, addressed: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 29, 2004.

The Commissioner is hereby authorized to charge any additional fees, which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account No. 16-0877.

  
Yaté K. Cutliff